Index to InTech, Vol 29, 1982

PUBLISHED ARTICLES

Article list	Month/Page
The Sun Also Rises: Looking for Low Technology	1/9
The Mother Tongue	1/43
Optimum Soot Blowing Can Improve Your Boiler Efficiency	1/45
Pollution Monitoring: Some Recent Patents	1/49
An Operator Training Simulator Benefits an Egyptian Lube Oil Refinery	1/57
Professional Involvement: Beyond the Technical Issues	1/92
Finding Your Niche: If You Lose Money on Every Sale, You Probably Won't Make It Up in Volume	2/9
It Still Has Bugs	2/33
Guide to Selecting Temperature Transmitters	2/35
You Can Save Money with Simple Heat Tracing Temperature Controls	2/55
Avoiding Error Sources in Platinum Resistance Temperature Measurement	2/57
Some Rules of Thumb for Troubleshooting Electronic Instrumentation	2/61
Proprietary Temperature Sensors: A Viable Alternative for Economical Measurement and Control	2/64
Remote Sensors for Air Pollution: Maintaining Their Distance	3/9
No Best Answer	3/33
Distributed Control for Batch Systems	3/35
Man-Machine Interfacing for the Process Industries	3/41
Process Optimization: More Than Buying a Computer	3/47
Electronic Instruments: Hostile Environments Seek Vendor/User Solutions	3/51
ISA Begins Computer Communications Network Experiment	3/99
Combustion Control: Computers + Composition = Cash	4/9
Seat-of-the-Pants Solutions	4/23
Guide to Selecting Combustion Stack Gas Analyzers	4/25
Monitoring Combustion Chamber Pulsations with Anechoic Pressure Probes	4/51
Ribbon Thermocouples May Solve Your Temperature Measurement Problems	4/55
Fiber Optics: A Bright Future	5/9
Women in Technology: Signs of Progress	5/23
A Stake in the Future	5/37
Using Electro-Optics for Non-Contact Level Sensing	5/39
The Fiber Optics Bearing Monitor	5/43
Privacy and Authentication: New Priorities for Industrial and Commercial Communication	5/47
Consider Thermoelectric Heat Pumps for Your Instrument Cooling Needs	5/55
Steam Purity Analysis Helps Fight Turbine Corrosion	5/59
Continuing Education — Developing an Ongoing Strategy	5/95
System, Heal Thyself: Self-Test and the Cost of Instrument Ownership	6/9
Enthusiasm Has its Limits: New Products and Commitments	6/25
Thriving on Obsolescence	6/39
Maintenance and Obsolescence: The Uses of the Past	6/41
Remote Field Service: Save Time and Money with Decision Support and Imbedded Diagnostics	6/47
Integrated Measurement Systems: Impact on Testing and Productivity	6/51
Waste Heat Recovery: Lower Technology, Lower Energy Costs	7/9
Maintenance and Obsolescence: The User View	7/19
Eke Out a Buck	7/37
Perform an Energy Audit on Your Boilers	7/39
Digital Control Saves Energy in Gas Pipeline Compressors	7/43
Electronic Engine Control for Heavy Diesel Trucks: Sensor and Strategy Shortcomings	7/47
Winterize Your Differential Pressure Instruments: A Trace of Protection	7/51
Replacing Installed Process Control Computers	7/57
Salaries: Some Recent Findings	7/93
Ion Selective Electrodes: Progress and Potential	8/9
The Knowledgeable User	8/29
Guide to Selecting pH and ORP Instrumentation	8/31
Process Liquid Chromatography: Promises and Problems	8/47
Using Near-Infrared Analysis for On-Stream Composition Measurements	8/51
Supreme Court Ruling Affects Voluntary Associations	8/71
What's New in Instrumentation: Let Me Taste Your Wares	9/9
Meeting User Needs: The Sales/Marketing Dilemma	9/38
Ultrasonics: A Sound Technology	9/44
Rotary Process Control Valves: Use Is Growing	9/67
Pandora's Box	9/85
Planning for Obsolescence: Innovation vs Maturity	9/89
Document Your Process Control System Software	9/93
Pressure Control for a Coal Conversion Process: Three Alternatives	9/97
Technology in Biomedical Instrumentation: Clinical and Laboratory Advances	9/101
Optimizing Compressor Operation with Dynamic Programming	9/105
Instrument Corrosion: It's Everybody's Business	9/109
Modernizing the Computer System for a Coal-Fired Power Plant: A Case History	9/115
Automating Checkout of Multi-Channel Instrumentation Systems: The Practical Is within Reach	9/121
Installing and Maintaining Instruments for Cryogenic Service	9/127
Combustible Gas Detectors: Toward Broader Standards	9/133
Avoiding Common Pitfalls in Instrument Installation	9/137
An Industry Overview: Charles F Knight Addresses Today's Issues	9/250
Instrumentation Today: Emphasis on Automation	9/278
International Pollution: Bordering on Control	10/9
Taking a Bath	10/39
Guide to Selecting Weighing, Batching, and Blending Systems	10/43
Specifying Batch Process Control Strategies: A Structured Approach	10/57
Digital Batch Process Control: Look at the Software	10/65
Fault-Tolerant Control for Batch Processes	10/69
Roasting Coffee: PCs Do It Better	10/73
Mechanical Test Measurement: Vibrations, Mass, Stress, and Force	10/79
Engineering Education: Facing a Troubled Future	10/123
Operator Interfaces: Power and Simplicity	11/9
Remember the Future	11/35
Test Measurement Productivity: Computers Can Contribute	11/37
Personal Microcomputers: Today's Tools for Instrument and Control Engineers	11/41
Financial Models for Justifying Computer Systems	11/45
Modeling and Simulation: Applications in Energy and the Environment	11/53
Engineering Education: Suggestions for Change	11/106
Compressor Control: Surging Ahead	12/9
Unconventional Wisdom	12/27
Guide to Selecting Noninvasive Flowmeters	12/29
Doppler Flowmeters: Common Questions About Uncommon Instruments	12/43
Positive Displacement Flowmeters: High Performance — with a Little Care	12/47

AUTHOR INDEX

Author index	Month/Page
Baqui, A	9/105
Barber, R W	5/55
Bassyoni, A	1/57
Beck, W A	9/93
Bellows, J C	5/59
Blumberg, D F	6/47
Bogel, G D	7/43
Brambley, J H	5/9
Calder, W	3/51
Carlo-Stella, G	3/35
Carver, T E	9/93
Chang, F H I	9/97
Chou, J	9/133
Couch, D J	9/115
Curren, W J	9/109
Dobrowolski, M	7/9
Erickson, I	11/45
Fihn, S L	10/57
Guillemin, C L	8/47
Hamell, E	9/67, 11/53, 12/9
Hamer, L	9/101, 10/79
Harvey, G F	8/71
Hendrix, A R	12/47
Hettenhaus, J R	6/25
Hickam, W M	5/59
Hoagland, J C	5/47
ICON Staff	7/19
InTech Staff	3/9, 3/99, 4/25, 5/95, 7/93, 9/250, 10/123
Jones, C	8/51
Jones, C D	2/61
Kafer, P	10/73
Kaya, A	1/45
King, C	5/39
Krigman, A	1/9, 1/43, 1/49, 1/92, 2/33, 2/35, 3/33, 4/9, 4/23, 5/37, 6/9, 6/39, 6/41, 7/37, 8/29, 8/31, 9/9, 9/85, 10/39, 10/43, 11/9, 11/35, 12/27, 12/29

(Continued on page 56)

Index to InTech, Vol 29, 1982

PUBLISHED ARTICLES

Article list	Month/Page
The Sun Also Rises: Looking for Low Technology	1/9
The Mother Tongue	1/43
Optimum Soot Blowing Can Improve Your Boiler Efficiency	1/45
Pollution Monitoring: Some Recent Patents	1/49
An Operator Training Simulator Benefits an Egyptian Lube Oil Refinery	1/57
Professional Involvement: Beyond the Technical Issues	1/92
Finding Your Niche: If You Lose Money on Every Sale, You Probably Won't Make It Up in Volume	2/9
It Still Has Bugs	2/33
Guide to Selecting Temperature Transmitters	2/35
You Can Save Money with Simple Heat Tracing Temperature Controls	2/55
Avoiding Error Sources in Platinum Resistance Temperature Measurement	2/57
Some Rules of Thumb for Troubleshooting Electronic Instrumentation	2/61
Proprietary Temperature Sensors: A Viable Alternative for Economical Measurement and Control	2/64
Remote Sensors for Air Pollution: Maintaining Their Distance	3/9
No Best Answer	3/33
Distributed Control for Batch Systems	3/35
Man-Machine Interfacing for the Process Industries	3/41
Process Optimization: More Than Buying a Computer	3/47
Electronic Instruments: Hostile Environments Seek Vendor/User Solutions	3/51
ISA Begins Computer Communications Network Experiment	3/99
Combustion Control: Computers + Composition = Cash	4/9
Seat-of-the-Pants Solutions	4/23
Guide to Selecting Combustion Stack Gas Analyzers	4/25
Monitoring Combustion Chamber Pulsations with Anechoic Pressure Probes	4/51
Ribbon Thermocouples May Solve Your Temperature Measurement Problems	4/55
Fiber Optics: A Bright Future	5/9
Women in Technology: Signs of Progress	5/23
A Stake in the Future	5/37
Using Electro-Optics for Non-Contact Level Sensing	5/39
The Fiber Optics Bearing Monitor	5/43
Privacy and Authentication: New Priorities for Industrial and Commercial Communication	5/47
Consider Thermoelectric Heat Pumps for Your Instrument Cooling Needs	5/55
Steam Purity Analysis Helps Fight Turbine Corrosion	5/59
Continuing Education — Developing an Ongoing Strategy	5/95
System, Heal Thyself: Self-Test and the Cost of Instrument Ownership	6/9
Enthusiasm Has its Limits: New Products and Commitments	6/25
Thriving on Obsolescence	6/39
Maintenance and Obsolescence: The Uses of the Past	6/41
Remote Field Service: Save Time and Money with Decision Support and Imbedded Diagnostics	6/47
Integrated Measurement Systems: Impact on Testing and Productivity	6/51
Waste Heat Recovery: Lower Technology, Lower Energy Costs	7/9
Maintenance and Obsolescence: The User View	7/19
Eke Out a Buck	7/37
Perform an Energy Audit on Your Boilers	7/39
Digital Control Saves Energy in Gas Pipeline Compressors	7/43
Electronic Engine Control for Heavy Diesel Trucks: Sensor and Strategy Shortcomings	7/47
Winterize Your Differential Pressure Instruments: A Trace of Protection	7/51
Replacing Installed Process Control Computers	7/57
Salaries: Some Recent Findings	7/93
Ion Selective Electrodes: Progress and Potential	8/9
The Knowledgeable User	8/29
Guide to Selecting pH and ORP Instrumentation	8/31
Process Liquid Chromatography: Promises and Problems	8/47
Using Near-Infrared Analysis for On-Stream Composition Measurements	8/51
Supreme Court Ruling Affects Voluntary Associations	8/71
What's New in Instrumentation: Let Me Taste Your Wares	9/9
Meeting User Needs: The Sales/Marketing Dilemma	9/38
Ultrasonics: A Sound Technology	9/44
Rotary Process Control Valves: Use Is Growing	9/67
Pandora's Box	9/85
Planning for Obsolescence: Innovation vs Maturity	9/89
Document Your Process Control System Software	9/93
Pressure Control for a Coal Conversion Process: Three Alternatives	9/97
Technology in Biomedical Instrumentation: Clinical and Laboratory Advances	9/101
Optimizing Compressor Operation with Dynamic Programming	9/105
Instrument Corrosion: It's Everybody's Business	9/109
Modernizing the Computer System for a Coal-Fired Power Plant: A Case History	9/115
Automating Checkout of Multi-Channel Instrumentation Systems: The Practical Is within Reach	9/121
Installing and Maintaining Instruments for Cryogenic Service	9/127
Combustible Gas Detectors: Toward Broader Standards	9/133
Avoiding Common Pitfalls in Instrument Installation	9/137
An Industry Overview: Charles F Knight Addresses Today's Issues	9/250
Instrumentation Today: Emphasis on Automation	9/278
International Pollution: Bordering on Control	10/9
Taking a Bath	10/39
Guide to Selecting Weighing, Batching, and Blending Systems	10/43
Specifying Batch Process Control Strategies: A Structured Approach	10/57
Digital Batch Process Control: Look at the Software	10/65
Fault-Tolerant Control for Batch Processes	10/69
Roasting Coffee: PCs Do It Better	10/73
Mechanical Test Measurement: Vibrations, Mass, Stress, and Force	10/79
Engineering Education: Facing a Troubled Future	10/123
Operator Interfaces: Power and Simplicity	11/9
Remember the Future	11/35
Test Measurement Productivity: Computers Can Contribute	11/37
Personal Microcomputers: Today's Tools for Instrument and Control Engineers	11/41
Financial Models for Justifying Computer Systems	11/45
Modeling and Simulation: Applications in Energy and the Environment	11/53
Engineering Education: Suggestions for Change	11/106
Compressor Control: Surging Ahead	12/9
Unconventional Wisdom	12/27
Guide to Selecting Noninvasive Flowmeters	12/29
Doppler Flowmeters: Common Questions About Uncommon Instruments	12/43
Positive Displacement Flowmeters: High Performance — with a Little Care	12/47

AUTHOR INDEX

Author index	Month/Page
Baqui, A	9/105
Barber, R W	5/55
Bassyoni, A	1/57
Beck, W A	9/93
Bellows, J C	5/59
Blumberg, D F	6/47
Bogel, G D	7/43
Brambley, J H	5/9
Calder, W	3/51
Carlo-Stella, G	3/35
Carver, T E	9/93
Chang, F H I	9/97
Chou, J	9/133
Couch, D J	9/115
Curren, W J	9/109
Dobrowolski, M	7/9
Erickson, I	11/45
Fihn, S L	10/57
Guillemin, C L	8/47
Hamell, E	9/67, 11/53, 12/9
Hamer, L	9/101, 10/79
Harvey, G F	8/71
Hendrix, A R	12/47
Hettenhaus, J R	6/25
Hickam, W M	5/59
Hoagland, J C	5/47
ICON Staff	7/19
InTech Staff	3/9, 3/99, 4/25, 5/95, 7/93, 9/250, 10/123
Jones, C	8/51
Jones, C D	2/61
Kafer, P	10/73
Kaya, A	1/45
King, C	5/39
Krigman, A	1/9, 1/43, 1/49, 1/92, 2/33, 2/35, 3/33, 4/9, 4/23, 5/37, 6/9, 6/39, 6/41, 7/37, 8/29, 8/31, 9/9, 9/85, 10/39, 10/43, 11/9, 11/35, 12/27, 12/29

(Continued on page 56)

Laspe, C G 11/41
Last, H 9/137
Lovett, O P 2/55
Marks, A 8/9, 10/9
McCready, A K 3/41
McWhorter, G 7/51
Merchant, J 5/39
Miller, J G 2/9, 9/38
Molee, C S 2/64
Mostafa, E S 1/57
Nanigian, J 4/55
Nielsen, T D 11/37
Nyquist, J A 10/57
O'Donnell, M M 9/89
Obleton, N 9/115
Pensenstadler, D F 5/59
Peterson, S H 5/59
Philips, G J 5/43
Purvis, J R, III 11/45
Reustle, E A 9/127
Rhodes, R L 7/43
Rochester, J 9/44
Rodman, C W 4/51
Scalera, M R 10/65
Schilling, J M 3/47
Schneider, J F 9/121
Simpson, R T 9/278, 11/106
Stanley, G C 6/51
Trietley, H L 2/57
Trimm, T G 7/39
Waller, J M 12/43
Ward, J C 10/65
Wensley, J H 10/69
Wolber, W G 7/47
Woods, N I 5/23
Wright, C P 11/37

TOPIC INDEX

Topic index — Month/Page

acoustic flowmeters 12/29, 12/43
air flow sensors 7/47
air pollution 1/49, 3/9, 10/9
analyzers 1/9, 3/9, 4/9, 5/59, 8/9, 8/31, 8/47, 8/51, 9/9, 9/133
anechoic probes 4/51
automated checkout 9/121
automated testing 6/51
automation 2/33, 9/278
automotive sensors 7/47
bandwidth measurement 9/121
batch process control .. 3/35, 9/9, 10/57, 10/65, 10/69, 10/73
batching 10/43
bearing monitors 5/43
biomedical instrumentation 9/101
blending 10/43
boiler control 1/45
boiler efficiency 7/39
calibration 9/133
carbon monoxide analyzers 4/25
career advancement 5/23, 7/93
chromatography 8/47
coal conversion 9/97
combustible gas detectors 9/133
combustion control 4/9, 4/25, 6/25
combustion monitoring 4/51
combustion pulsations 4/51
communications 5/47, 3/99, 9/44
composition measurement 4/25, 9/44
compressor control 7/43, 9/105, 12/9
computer control 9/115
computer languages 1/43
computer systems 11/45
computerization 2/33
computerized data bases 3/99
computers 9/89
control valves 9/67
cooling 5/55
corrosion 3/51, 5/59, 9/109
cost evaluations 11/45
cost-saving analyses 11/45
CRT interfaces 11/9, 3/41
cryogenic service 9/127
cryogenic valves 9/97
cryptography 5/47
custody transfer 12/47
decision support 6/47
diagnostic procedures 6/47
diesel engine monitoring 7/47
differential pressure 7/51
digital control 1/57, 3/47
displacement monitoring 5/43
distributed control 3/35, 9/115
SAMA 1/92
documentation 9/93
Doppler flowmeters 12/43
dynamic programming 9/105
economic justification 9/115, 11/45
EIES 3/99
electro-optics 5/9, 5/39
electrochemical sensors 8/9
electronic data transmission 5/47
electronic instrumentation 2/61, 3/51
energy 11/53
energy alternatives 9/97
energy audits 7/39
energy efficiency 1/45
energy management 4/9, 7/43
energy recovery 7/9
energy savings 2/55
engine control 7/47
environment 11/53
fault tolerance 10/69
fiber optics 5/9, 5/43, 9/9
field support 6/47, 9/9, 9/127, 12/29, 12/43, 12/47
fluid friction 10/79
food processing 10/73
freeze protection 7/51
fuel economy 9/105
futurism 5/37, 11/35
gas analyzers 4/25
government affairs 1/92
hardware 11/41
hazardous occupancies 2/35
heat pumps 5/55, 7/9
heat tracing 2/55
heating 5/55
high-level language 10/65
hostile environments 3/51
IEEE-488 ..... 6/51
information exchanges 3/99
infrared analyzers 8/51
instrument development 6/25, 7/37, 9/9, 9/250
instrument failures 9/109
instrument installation 9/137
instrument interfacing 6/51
instrument leasing 6/41
instrument protection 3/51
intelligent interfaces 11/9
international pollution 10/9
ion chromatography 5/59
ion-selective electrodes 8/9
laboratory automation 11/37
lasers 5/39
level measurement 9/127, 5/39
LIDAR 3/9
linearity measurement 9/121
liquid chromatographs 8/47
low-temperature service 9/127
magnetic flowmeters 12/29
maintenance 2/61, 6/41, 6/47, 7/19, 7/57, 9/127
man-machine interfaces 3/41, 11/9
marketing 2/9, 9/38
mass measurement 10/79
materials selection 9/109
mathematical modeling 9/101
mechanical measurement 10/79
microcomputers 11/41
microprocessors 3/35, 9/101
modeling 11/53
near-infrared analyzers 8/51
noise floor measurement 9/121
noninvasive flowmeters 12/29
object detection 9/44
obsolescence 6/39, 6/41, 7/19, 7/57, 9/89, 10/39
on-stream analyzers 8/47, 8/51
operator interfaces 3/41, 9/9, 11/9
operator training 1/57
optical communications 5/9
optimization 3/47, 9/105
ORP instrumentation 8/31
oxygen analyzers 4/25
personal computers 11/41
pH instrumentation 8/31
photoelasticity 10/79
photovoltaic cells 1/9
physiological monitoring 9/101
pipeline control 7/43
pollution control 4/25, 7/9
pollution monitoring 1/49
pollution sensors 3/9
positive displacement meters 12/47
power plant control 9/115
power plant instrumentation 5/59
pressure 9/127
pressure control 9/97
problem-solving 4/23
process analyzers 8/47, 8/51
process computers 7/57, 9/93
productivity 11/37
professional education 3/33, 5/95, 8/29, 10/39, 10/123, 11/106, 12/29
professionalism 5/23
programmable controllers 10/73
programming 9/9
project management 9/93, 9/115
recovery boilers 3/47
REDOX instrumentation 8/31
redundancy 10/69
refinery control 1/57
regulators 2/55
reliability 3/51, 6/9, 9/9
remote sensing 3/9
repair 6/41
replacement 9/89
rotary actuators 9/9
rotary valves 9/67
RTDs 2/35, 2/57
safety 9/109
salaries 7/93
SAMA 1/92
self-diagnostics 6/9, 6/41
self-testing 6/9
sensors 3/47
sequence control 3/35
service availability 7/19
service delivery 6/47
simulation 1/57, 11/53
software 1/43, 9/93, 10/65, 11/41
solar energy 1/9
soot blowing 1/45
stack analyzers 4/25
stack measurements 7/39
standards 1/92, 8/71, 9/133
steam purity 5/59
surge prevention 12/9
technology forecasting 5/37, 11/35
telemetry 9/101
temperature instrumentation 2/35, 2/55, 2/57, 2/64, 4/55, 9/27
test instrumentation 9/121
test measurement automation 11/37
thermistors 2/64
thermocouples 2/35, 4/55
thermoelectrics 5/55
tracing 7/51
trade shows 9/85
training 5/95
transmitters 2/35
troubleshooting 2/61, 4/23
turbine corrosion 5/59
ultrasonic flowmeters 12/29, 12/43
ultrasonics 9/44, 9/101
unit operations 10/57
valves 9/67
vibration analysis 10/79
vibration monitoring 5/43
video display terminals 3/41
waste heat recovery 7/9
water pollution 1/49, 10/9
weighing 10/43
weight measurement 10/79
winterization 7/51
wiring practices 9/137